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Amendments to the Claims

1. (Currently Amended) A tracking generator for an RF measurement instrument ~~of the type~~ having a controller and a receiver comprising:
  - means for generating a baseband signal under control of the controller;
  - means for modulating the baseband signal with a modulation oscillator frequency to produce a modulation signal; and
  - means for mixing the modulation signal with a local oscillator frequency from the receiver to produce a test signal having an output frequency that matches a measurement frequency for the receiver.
2. (Original) The tracking generator as recited in claim 1 further comprising means for offsetting the output frequency from the measurement frequency.
3. (Original) The tracking generator as recited in claim 2 wherein the offsetting means comprises means in the generating means for providing an offset in the baseband signal.
4. (Original) The tracking generator as recited in claim 2 wherein the offsetting means comprises means for adaptively filtering the baseband signal by lowpass filtering the baseband signal when a small offset in the baseband signal is desired and bandpass filtering the baseband signal in a frequency band above a Nyquist band when a larger offset in the baseband signal is desired.
5. (Original) The tracking generator as recited in claim 2 wherein the offsetting means comprises means for adjusting the local oscillator signal prior to input to the mixing means.
6. (Original) The tracking generator as recited in claim 2 wherein the offsetting means comprises means for controlling a modulation oscillator frequency for the modulating means to produce an offset in the modulation signal.
7. (Original) The tracking generator as recited in claim 6 wherein the modulation oscillator frequency comprises an intermediate oscillator frequency from the receiver.

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8. (Original) The tracking generator as recited in claim 6 wherein the modulation oscillator frequency comprises an internal local oscillator frequency.
9. (Original) The tracking generator as recited in any of claims 1-6 wherein the generating means comprises:
- means for pre-processing digital data to provide a baseband digital signal in response to control by the controller; and
  - means for converting the baseband digital signal to a baseband analog signal as the baseband signal.
10. (Original) The tracking generator as recited in claim 9 wherein the baseband signal comprises a complex vector baseband signal having an in-phase and a quadrature-phase component and the modulating means comprises:
- a pair of mixers, each mixer having as inputs respectively one of the in-phase and quadrature-phase components and respectively an in-phase and a quadrature-phase frequency component of the modulation oscillator frequency; and
  - means for combining the outputs of the mixers to produce the modulation signal.
11. (Original) The tracking generator as recited in claim 10 wherein the in-phase and quadrature-phase frequency components are derived from an intermediate oscillator frequency from the receiver.
12. (Original) The tracking generator as recited in claim 9 wherein the baseband signal comprises a tone signal and the modulating means comprises a mixer for mixing the tone signal with the modulation oscillator frequency to produce the modulation signal.
13. (Original) The tracking generator as recited in claim 9 wherein the mixing means comprises an output mixer having as inputs the modulation signal and the local oscillator frequency to produce at an output the test signal.

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14. (Currently Amended) A method of producing a test signal from a tracking generator within an RF instrument ~~of the type~~ having a controller and a receiver comprising the steps of:
- generating a baseband signal under control of the controller;
  - modulating the baseband signal with a modulation oscillator frequency to produce a modulation signal; and
  - mixing the modulation signal with a local oscillator signal from the receiver to produce the test signal having an output frequency that matches a measurement frequency for the receiver.
15. (Original) The method as recited in claim 14 further comprising the step of offsetting the output frequency from the measurement frequency.